

What is claimed is:

- [1. A method for the cleaning of an injection mold comprising the steps of:

configuring the operating controls of a dry ice blasting system to produce a cleaner flow of dry ice granules entrained in a gas with the dry ice granules ranging in size from approximately 0.005 to 0.040 inches in diameter, at a gas-to-dry ice mass ratio ranging from approximately 2.0 to 3.5, and at a gas flow rate ranging from approximately 3 to 50 SCFM; and

positioning a nozzle tip of a hand tool a distance from a surface to be cleaned;

triggering the operation of the blasting system to initiate the cleaner flow.
2. The method of cleaning an injection mold according to Claim 1, wherein, in the step of positioning a nozzle tip of a hand tool, optimal cleaning is achieved at a distance ranging from 0.5 and 1.5 inches.
3. The method of cleaning an injection mold according to Claim 2, further comprising the steps of opening the mold, and positioning a mold ejection mechanism to expose the surface to be cleaned.
4. The method of cleaning an injection mold according to Claim 3, wherein, in the step of configuring the operating controls, the gas to dry ice ratio is kept at approximately 3.0 for cleaning a vent of the preform mold.
5. The method of cleaning an injection mold according to Claim 4, wherein, in the step of configuring the operating controls, the granule size is kept at approximately 0.020 inches in diameter for cleaning the vent of the preform mold.

6. The method of cleaning an injection mold according to Claim 5, wherein, in the step of configuring the operating controls, the gas flow rate is kept at approximately 25 SCFM for cleaning the vent of the preform mold.
7. The method of cleaning an injection mold according to Claim 6, wherein, in the step of positioning a nozzle tip of a hand tool, the position of the nozzle tip is kept approximately 1.0 inch from the vent of the preform mold.
8. The method of cleaning of claim 7 further comprising the steps of:  
set a dry ice delivery system operating parameters to produce dry ice granules that are preferably 0.020 inches in diameter.
9. The method of cleaning of claim 7 further comprising the steps of:  
set said dry ice delivery system operating parameters to maintain a gas to dry ice ratio that is preferably 3.0;
10. The method of cleaning of claim 7 further comprising the steps of:  
set said dry ice delivery system operating parameters to maintain a flow rate that is preferably 25 SCFM;
11. The method of cleaning of claim 7 further comprising the steps of:  
position a nozzle tip of said dry ice delivery system that is preferably 1.0 inches from said surface.
12. The method of cleaning of claim 7 wherein said mold is for the production of preforms.
13. A system for cleaning an injection mold comprising:  
a dry ice delivery system;  
a hand tool;  
said dry ice delivery system provides a flow of dry ice granules in a gas suspension to a discharge port;

said hand tool further includes a nozzle;  
said nozzle of said hand tool connected to said discharge  
port of said dry ice delivery system; wherein:  
said dry ice delivery system operable to produce dry ice  
granules that are preferably between 0.005 and 0.040 inches  
in diameter;  
said dry ice delivery system controllable to maintain a gas  
to dry ice ratio preferably between 2.0 and 3.5;  
said dry ice delivery system controllable to maintain a  
flow rate preferably between 3 and 50 SCFM.

14. The cleaning system of claim 13 wherein said nozzle of said hand tool is preferably between 0.20 and 0.60 inches in diameter.
15. The cleaning system of claim 13 wherein said nozzle length of said hand tool is preferably between 2.5 and 12.0 inches.
16. The cleaning system of claim 5 wherein said nozzle of said hand tool is preferably 0.40 inches in diameter.
17. The cleaning system of claim 16 wherein said nozzle length of said hand tool is preferably 6.0 inches.
18. The cleaning system of claim 17 wherein said hand tool includes a pistol grip.
19. The cleaning system of claim 18 wherein the angular inclination of said nozzle to said pistol grip is incrementally adjustable.
20. The cleaning system of claim 19 wherein said hand tool includes at least one light positioned to cast light in the direction of the nozzle discharge.
21. The cleaning system of claim 20 wherein said at least one light is a light emitting diode.

22. The cleaning system of claim 21 wherein said hand tool includes a valve to control said gas pressure and hence said flow rate.
23. The cleaning system of claim 22 wherein said mold is for the production of preforms.]

24.     A method for the cleaning of an injection mold comprising the steps of:  
configuring the operating controls of a dry ice blasting system to produce a cleaner flow comprising dry ice granules entrained in a gas with the dry ice granules ranging in size from approximately 0.005 to 0.040 inches in diameter, at a gas-to-dry ice mass ratio ranging from approximately 2.0 to 3.5, and at a gas flow rate ranging from approximately 3 to 50 SCFM; and  
positioning a nozzle tip of a hand tool a distance from a surface to be cleaned;  
triggering the operation of the blasting system to initiate the cleaner flow.
25.     The method of cleaning an injection mold according to Claim 24, wherein, the nozzle tip of the hand tool is positioned at a distance ranging from 0.5 and 1.5 inches from the preform surface to be cleaned.
26.     The method of cleaning an injection mold according to Claim 25, further comprising the steps of opening the injection mold, and positioning a mold ejection mechanism to expose the preform surface to be cleaned.
27.     The method of cleaning an injection mold according to Claim 26, wherein, in the step of configuring the operating

controls, the gas to dry ice ratio is kept at approximately 3.0 for cleaning a vent of the preform.

28. The method of cleaning an injection mold according to Claim 27, wherein, in the step of configuring the operating controls, the granule size is kept at approximately 0.020 inches in diameter for cleaning a vent of the preform.

29. The method of cleaning an injection mold according to Claim 28, wherein, in the step of configuring the operating controls, the gas flow rate is kept at approximately 25 SCFM for cleaning the vent of the preform mold.

30. The method of cleaning an injection mold according to Claim 29, wherein, in the step of positioning a nozzle tip of a hand tool, the position of the nozzle tip is kept approximately 1.0 inch from the vent of the preform mold.